

Claims:

1 1. (new) An apparatus for transmitting a signal from deep in a wellbore
2 through a string of tubulars said apparatus comprising a signal conductor and a tubular
3 characterized in that said signal conductor is located adjacent an interior surface of
4 said tubular.

1 2. (new) The apparatus of claim 1 wherein said signal conductor is an
2 electrical conductor.

1 3. (new) The apparatus of claim 2 wherein said electrical conductor is
2 isolated from said interior surface of said tubular by a layer of electrically insulative
3 material.

1 4. (new) The apparatus of claim 3 wherein said interior surface of said tubular
2 is coated in said insulative layer.

1 5. (new) The apparatus of claim 1 wherein said signal conductor is a wire
2 embedded in a protective layer.

1 6. (new) The apparatus of claim 2 wherein said electrical conductor is foil and
2 a protective layer covers said foil.

1 7. (new) The apparatus of claim 2 wherein said electrical conductor comprises
2 a micro strip line.

1 8. (new) The apparatus of claim 6 wherein said micro strip line comprises a
2 conductive core and an insulating layer encasing said conductive core.

1 9. (new) The apparatus of claim 8 wherein said insulating layer is encased in
2 an outer conductive layer.

1 10. (new) The apparatus of claim 1 wherein said signal conductor extends
2 substantially the entire length of said tubular.

1 11. (new) The apparatus of claim 1 further comprising a plurality of signal
2 conductors including a first signal conductor and a second signal conductor, the first
3 signal conductor carrying a signal and the second signal conductor carrying
4 substantially the same signal.

1 12. (new) The apparatus of claim 1 wherein said signal conductor is provided
2 with means for transferring said signal from said signal conductor to another signal
3 conductor in an adjacent tubular.

1 13. (new) The apparatus of claim 1 wherein said signal conductor is provided
2 with an antenna at at least one end of said tubular.

1 14. (new) The apparatus of claim 1 wherein a receiving antenna is provided
2 at one end of said tubular and a transmitting antenna is provided at the other end of
3 said tubular, said signal conductor arranged therebetween.

1 15. (new) The apparatus of claim 1 further comprising an amplifier-receiver.

1 16. (new) The apparatus of claim 15 wherein said amplifier-repeater comprises
2 a signal amplifier and a power source.

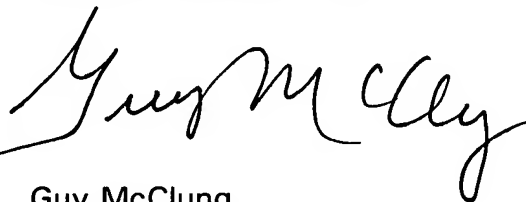
1 17. (new) The apparatus of claim 16 wherein said power source comprises a
2 piezoelectric device.

1 18 (new) The apparatus of claim 1 wherein said signal conductor is arranged
2 in a recess in said interior wall of said tubular.

1 19 (new) The apparatus of claim 1 wherein said tubular is drill pipe.

1 20. (new) A method for transmitting a signal from deep in a wellbore through
2 a string of tubulars, the method comprising passing said signal through an electrical
3 conductor located adjacent an interior surface of said tubular.

Respectfully submitted,



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